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CHILD HEALTH POLICY, PROGRAM AND GAPS IN NEPAL

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ABSTRACT

Child health has been recognized as fundamental right of every child since long time. Child mortality is regarded as an import indicator of the health status of a community, effectiveness of the services and level of living of people. Substantial progress has been made towards achieving MDG target related to child health but still, significant numbers of children are dying every day due to preventable causes such as improper or harmful practices, infection, vaccine preventable diseases and malnutrition; mostly in developing countries and in rural setting due to unavailability and/or poor quality child health services. Due to lack of awareness and other socio-cultural factors, available health services are not also utilized properly. The objective of this paper was to review relevant literatures to describe the gaps regarding child health policy, program and services delivered in Nepal. This paper built on review of relevant literatures published in between 1990 and 2017. Very few published studies reporting child health policy, program and gaps in Nepal were found. The study included policy, program, strategy, guidelines, annual reports published by government of Nepal, National and International Organizations. The review revealed that child health has been on topmost priority in Nepal since 1990 and it has been getting priority agenda in several policy papers. Progressive improvement in child health has been observed in between 1990 and 2017.During the period, Neonatal Mortality, Infant Mortality and child Mortality have been reduced by 58, 59 and 67 percent respectively and are on the track according to MDG target but achieving the further national and international policy targets (SDG) within the specified timeframe are still challenging especially neonatal health related targets. More efforts are needed to sustain the current achievement and make further progress on child health.

KEYWORDS: Child Health, Health Policy, Child Health Policy, Child Health Program, Millennium Development Goals, Sustainable Development Goal, Under Five Mortality, Child Mortality, Infant Mortality, Neonatal Mortality, Stunting, Wasting, Underweight & Immunization Coverage

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INTRODUCTION

Child health is defined as the health of children younger than 5 years (Perinatal <7days old, neonate <29 days old, child health <5 years of age). [1]

One of the targets of Millennium Development Goal (MDG) 4, was to reduce global under-five mortality rate by two-thirds in the period between 1990 and 2015[2]. World has achieved considerable progress in child survival since 1990. Globally, under-five mortality rate has declined by 56 percent from 93 deaths per 1,000 live births in 1990 to 41 in 2016. The total deaths among children under-five years reduced to 5.6 million in 2016 from 12.6 million in 1990 – 15,000 every day compared with 35,000 in 1990. Likewise, neonatal mortality rate has reduced by 49 per cent from 37 deaths per 1,000 live births in 1990 to 19 in 2016. The neonatal period of life - birth to 28 days - is the most vulnerable time for child's survival. Globally, the risk of dying in the neonatal period is highest among children under five at 19 deaths per 1000 live births followed by 12 deaths per 1000 live births for infant between one month and one year and 5 deaths per 1000 live births for children between one year and five years. Globally, among 2.6 million children died in the neonatal period in 2016, most of the death occurred within the early neonatal period, with about one million deaths on first day and about another one million deaths within the next six days. Due to the slower decline of neonatal mortality (49%) relative to mortality in children aged 1–59 months (62%), the contribution of neonatal deaths among children under-five have raised from 40% in 1990 to 46% in 2016. As the mortality rate of children under-five is continuously reducing, the contribution of neonatal death among children under-five is expected to increase more in future.[3]

Prematurity and low birth weight, infections, birth asphyxia and birth trauma are the major causes of newborn deaths which are responsible for 80% of newborn deaths[4] while pneumonia, diarrhoea, injuries and malaria were the major causes of mortality among children in the post-neonatal period.[8] Since 2000, child mortality has fallen largely due to decreases in deaths from pneumonia by 47%, malaria by 58%, intra-partum related complication by 38% and measles by 75% between 2000 and 2015.[5] From 2000 to 2015, reduction in neonatal mortality has been driven by decline in death due to birth asphyxia by 34% and prematurity by 21% and neonatal tetanus by almost 80%.[5]

Global prevalence of underweight was declined by 44 percent slightly lower than the MDG 1 target from 25 percent in 1990 to 14 percent in 2015. Prevalence of stunting among children was declined in all regions except African Region where the prevalence of stunting increased by 28 percent due to population growth between 1990 and 2015.[6]

Global prevalence of exclusive breastfeeding among infants younger than six months increased from 28% in 1990 to 34% in 2010 whereas in twenty five countries prevalence of exclusive breastfeeding increased by more than 25% during the same period.[7]

In Nepal, an estimated 23,000 children die each year before reaching their fifth birthday with three out of five babies dying within twenty eight days after birth, the newborn period.[9] The neonatal mortality rate is 21 deaths per 1,000 live births, infant mortality rate is 32 deaths per 1,000 live births and under-5 mortality rate is 39 deaths per 1,000 live births. Between 1996 and 2016, neonatal mortality fell from 50 to 21 deaths per 1,000 live births representing a 58% decrease during the 20-year period, infant mortality declined from 78 to 32 deaths per 1,000 live births representing a 59% decrease during the 20-year period, and under-5 mortality fell from 118 to 39 deaths per 1,000 live births representing a 67% decrease during the 20-year period. These rates imply that nearly one in 30 children die before reaching their first birthday and that one in 25 die before reaching their fifth birthday. Slightly more than one-half (54%) of all deaths in the

first 5 years of life occur in the first month of life, an increase from 42% in 1996. As childhood mortality rates have declined, the burden of neonatal deaths has increased.[10]

One of the 17 goals of sustainable development goals also has been devoted specifically to health: "Ensure healthy lives and promote well-being for all at all ages". SDG 3.2 is related child mortality that is "to end preventable deaths of newborns and under-five children".[2] Target set for national level are to reduce U5MR to 25 deaths per 1000 live births and neonatal mortality to 12 per 1000 live births by 2030.[8]

The objective of this paper was to review relevant literatures to describe the gaps regarding child health policy, program and services delivered in Nepal.

METHOD

We reviewed the literature from 1990 to 2017 to identify studies on child health policy, program and gaps in Nepal. To find these studies, we conducted online search of Pub Med, Science Direct, Google Scholar, World Health Organization (WHO), UNICEF, Ministry of Health and Population Nepal, Department of Health Service Nepal WebPages. We searched literature by using key words: "Child Health", "Child mortality", "Infant mortality", "Neonatal mortality", "Nepal", "Policy", "Program", "Underweight", "Wasting", "Stunting", "Immunization", "Nutrition" "Annual Report". Recent government reports and data from known unpublished survey/reports were also included.

POLICY PERSPECTIVE

National Health Policy 1991

The Policy was formulated in 1991to upgrade the health standard of people by extending basic primary health services throughout the country with special focus on rural areas. The policy aimed to reduce the IMR to 50 from 107 per 1000 live births and U5MR to 70 from 197 per 1000 live births by the year 2000. Maternal child health including Immunization, family planning was kept as one of the priority program under preventive health services in this policy.[11]

Second Long Term Health Plan (SLTHP) 1997-2017

Aim of the twenty years second long term plan was to improve the health status of the population through expanding essential health care services and by providing equitable access to quality health care services particularly to most vulnerable, underprivileged, marginalized, women and children. Major targets of this policy in context of child health were reducing IMR to 34.4 from 74.7. per 1000 live births; U5MR to 62.5 from 118 per 1000 live births; Newborns having LBW to 12 percent; Availability of Essential Health Care Services at the District to 90 percent of the population living within 30 minutes travel time by the year 2017.[12]

National Nutrition Policy & Strategy (2004)

The aim of the strategy is to achieve healthy life and nutritional well being through implementation of nutrition program. The specific objectives of the strategy related to child health are to reduce the prevalence of PEM among children to half of the 2000 level, to reduce prevalence of anemia due to iron deficiency to <40 percent, to eliminate disorders due to iodine deficiency and vitamin A deficiency, to reduce the prevalence of intestinal worms to <10 percent, and to reduce the prevalence of LBW babies to 12 percent by 2017.[13]

Multi-Sector Nutrition Plan 2013-2017 (MSNP)

Multi-sector Nutrition plan (2013-2017) was prepared by the Planning Commission of Nepal, Government of Nepal to address chronic malnutrition which includes infant and young child feeding as a major intervention. The aim of MSNP is to improve maternal and child nutrition, which will result in the reduction of Maternal, Infant and Young Child under -nutrition, in terms of maternal Body Mass Index and child stunting, by one third.[14]

Multi-Sector Nutrition Plan 2018-2022 (2075/76-2079/80) (MSNP II)

National Planning Commission of Nepal envisioned MSNP II to improve nutritional status of women, adolescent and children by expanding nutrition specific, nutrition sensitive and enabling environment program. Target of MSNP II are to reduce stunting and wasting among under five years children from 35.8 and 9.7 respectively in 2016 to 28 and 7 respectively by 2022.[15]

National Neonatal Health Strategy 2004

This strategy aims at improving the health and survival of newborns and it's strategic objectives are "to achieve a sustainable and enhanced healthy practices and diminish the existing unsafe mal-practices related to newborn care and to enhance the quality of preventive, promotive as well as curative health services at every levels".[16]

National Safe Motherhood & Newborn Health Long Term Plan 2006-2017

Government of Nepal formulated National Safe Motherhood & Newborn Health Long Term Plan 2006-2017 to improvematernal and neonatal health and survival, especially of the poor and excluded. National Safe Motherhood & Newborn Health Long Term Plan (NSMNH-LTP) 2006-2017 aims to reduce the neonatal mortality ratio from 39 per 1,000 to 15 per 1,000 by 2017.[17]

Nepal Health Sector Programme Implementation Plan (NHSP-IP) 2004-2009:

To reform the entire health system by adopting the sector wide approach (SWAp) in Health, Government of Nepal, in collaboration with external developmental partners (EDPs) formulated NHSP-IP in 2004.

The aim of NHSP-IP are to achieve three program outputs which are "prioritized essential health care services to all, decentralized management of health facilities at lower level, and specified the role for the private sector in health care"; and five sector management outputs which are "sector management, financing and resource allocation, physical assets management, human resource development, and integrated system for information management". Regarding child health, the plan puts its emphasis in reducing under-five mortality Ratio to 65 per 1000 live birth and infant mortality rate to 50 by 2009.[18]

Nepal Health Sector Programme - Implementation Plan (NHSP-IP II) 2010-2015:

Ministry of Health, Government of Nepal formulated Nepal Health Sector Programme - Implementation Plan (NHSP-IP II) 2010-2015 aiming at improving the health and nutritional wellbeing of people of Nepal especially the poor, deprived, marginalized and excluded. The objective is to reduce the under-five mortality rate from 51 per 1,000 live births in 2008 to 38 by 2015, to reduce infant mortality from 41 per 1,000 live births (2006) to 32 per 1,000 by 2015 and to reduce neonatal mortality from 33/1,000 live births in 2006 to 16/1,000 by 2015.[19]

Nepal Health Sector Programme III - Result Framework (NHSP III RF) 2015-2020

The objective of NHSP III RF (2015-2020) is to reduce under-five mortality to 45 per 1000 live births by 2017 and 40 per 1000 live births by 2020 and to reduce neonatal mortality to 17 per 1000 live births by 2017 and 14 per 1000 live births by 2020.[20]

Nepal Health Sector Strategy 2015-2020

The strategy envisioned health as a fundamental right of every citizen and to provide them productive and quality lives with maximum level of physical, mental, social and emotional health by ensuring access to quality, equitable and accountable health system. The strategy aims to reduce U5MR below 28 per 10000 live births and NNMR below 17.5 per 10000 live births by 2020.[21]

National Health Policy 2014

National health policy 2014 formulated to ensure the fundamental right of citizens to remain healthy. It aims to achieve universal health coverage through effective and responsible health care system by qualified health professionals using evidence based technologies. The policy puts its emphasis in producing skilled human resources to improve child health and make provision of a doctor and a nurse in every Village Development Committee (VDC) and a midwife in every ward.[22]

Nepal's Every Newborn Action Plan (2016)

NENAP (2016) envisioned preventable deaths of newborns or stillbirths free Nepal where every child birth is planned, celebrated and children enjoy their full capabilities. The aims of NENAP are to reduce stillbirth rate to <13 per 1000 total births and neonatal mortality rate to <11 per 1000 live births by 2035 in each province of Nepal.[23]

CHILD HEALTH PROGRAMS (SERVICE PROVISIONS)

Community based Integrated Management of Newborn and Childhood Illness (2015)

CBIMNCI is an integration of CB-IMCI and CB-NCP Program envisioned in 2015 to achieve the goal "to improve newborn and child survival and healthy growth and development". The CBIMNCI program aims to decrease the morbidities and mortalities among newborn babies, infants and under-five children as well as improving the nutritional status.[24]

Community-Based Newborn Care Package / Programme (CBNCP)

New Born Care Program (CB-NCP)' was designed in 2007, and piloting started in 2009. CB-NCP had incorporated seven strategic interventions as behavior change communication, promotion of institutional delivery, postnatal care, management of neonatal sepsis, care of low birth weight newborns, prevention and management of hypothermia and recognition and resuscitation of birth asphyxia.[25]

Provisions of the AAMA and Newborn Programme

Newborn program made provision of a payment to health facilities for providing free sick newborn care. A set of package is designed for health facilities that provide newborn care free of cost. Facility providing package 0 do not get any cost, package A gets NPR 1000, package B gets NPR 2000 and package C gets NPR 5000.. It also have provision of a payment of NPR 300 to health workers for providing all forms of packaged services to sick newborn.[24]

Nyano Jhola Programme

To keep the baby warm and protect from hypothermia, Nyano-Jhola Program started in fiscal year 2069/2070. It includes bhoto, daura, napkin, cap, wrapper, mat and gown which are provided to newborn baby and mother delivered at district hospital and birthing centres.[24]

Use of Chlorohexidine to Prevent Umbilical Cord Infection (2011)

In September 2011, Ministry of Health of Nepal decided to implement the Chlorhexidine Digluconate (7.1% w/v) to prevent umbilical infection of newborn. The goal of the program was to "Contribute to the reduction of neonatal mortality through the use of chlorhexidine". In Nepal, use of chlorhexidine has reduced newborn deaths by 24 percent and newborn infections by 68 percent. Nepal has been acknowledged for being the first country to manufacture and adopting for application at health facility and in community.[25, 26]

The Multi-Year Plan for Immunization 2007–2011

The aim of multi-year plan for immunization 2007-2011 was to reduce child morbidity, mortality and disability associated with vaccine preventable diseases. The objectives of the NIP are to achieve and sustain 90 percent coverage of DPT3 by 2008 and all antigens by 2010, to maintain polio free status, sustain MNT elimination status, to initiate measles elimination, to expand VPDs surveillance to accelerate control of other vaccine-preventable diseases through introduction of new vaccines, to enhance and maintain the quality of immunization and to include beyond infancy group under immunization service. [27]

Comprehensive Immunization Multi-Year Plan 2068-2072 (2011-2016)

Comprehensive Immunization Multi-Year plan 2068-2072 (2011-2016) aimed at decreasing the morbidities and mortalities related with vaccine preventable diseases among children under-five. Achieving and maintaining at least 90 percent immunization coverage of all antigens by 2016, ensuring access to vaccines of good quality, attaining and sustaining polio free status, sustaining elimination status of tetanus, attaining elimination status of measles, introducing new and under-utilized vaccines, strengthening vaccine-preventable disease surveillance and including children beyond infancy under immunization are the major objectives of the NIP (2011-2016). [28]

Bi-Annual Supplementation of Vitamin a Program

National Vitamin A Programme was initiated in 1993 to improve the vitamin A status of children aged 6-59 months and reduce child mortality. This programme is recognized as a global public health success story. It initially covered 8 districts and was scaled up nationwide by 2002. FCHVs distribute the capsules to the targeted children twice a year through a campaign-style activity. [29]

Bi-Annual Deworming tablet Distribution to the Children aged 12-59 Months

The aim of Biannual Deworming Tablet Distribution to the Children aged 12-59 months was to reduce childhood anaemia with the control of parasitic infestation through public health measures. This program was integrated with biannual Vitamin A supplementation to the children aged 6-59 months in 2000 which takes place nationally in every ward on first week of Baisakh and Kartik each year. Deworming to the target children was initiated in few districts during the year 2000 integrating with biannual Vitamin A supplementation and with gradual scaling-up, the program was successfully implemented nationwide by the year 2010.[29]

GAPS IN CHILD HEALTH

Trend of Child Mortality in Nepal for the Period 1996 to 2016

Based on results from the 1996, 2001, 2006, 2011, and 2016 NDHS surveys, a pattern of decreasing childhood mortality have been observed during the 20 years since 1996. The overall under-5 mortality rate has declined from 118 deaths per 1,000 live births during the 5 years immediately preceding the 1996 NDHS to 61 deaths per 1,000 live births in the 5 years prior to the 2006 NDHS, to 39 deaths per 1,000 live births in the most recent 5-year period. Infant mortality decreased from 78 deaths per 1,000 live births, to 48 deaths per 1,000 live births, to 32 deaths per 1,000 live births over the same periods. Though the neonatal mortality stagnated at 33 deaths per 1,000 live births for nearly a decade as reported by the 2006 NDHS and 2011 NDHS, it has declined to 21 deaths per 1,000 live births in the most recent 5-year period.[10]

Though Nepal met its Millennium Development Goal target of reducing under-5 mortality to 54 deaths per 1,000 live births by 2015, it has a long way to go to meet the SDG target for 2030, reducing under-5 mortality to 22deaths per 1,000 live births.[30]

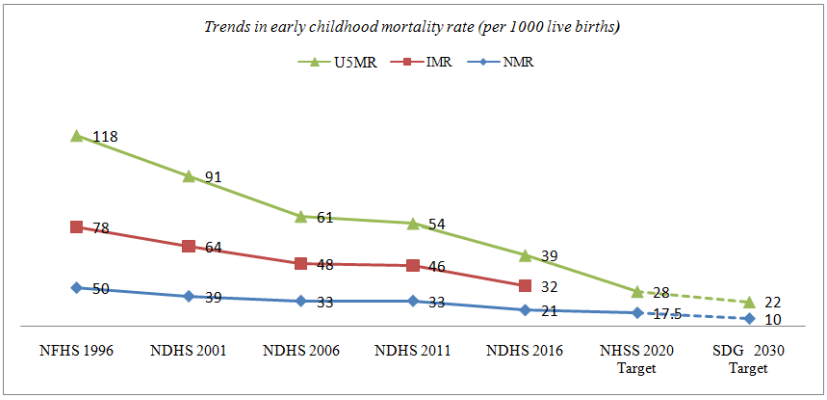

Figure 1: Trend in Early Childhood Mortality 1991-2016 by National Surveys[10, 21, 30-34]

Trends in the Nutritional Status of Children in Nepal for the Period 1996 to 2016

Nutritional status of children in Nepal has improved over the last 20 years. The percentage of stunted children declined by 14% between 2001 and 2006, declined by an additional 16% between 2006 and 2011, and dropped by 12% between 2011 and 2016. A similar declining trend is observed for underweight children. This decline has been in line with the Millennium Development Goal (MDG) target. However, there is still a long way to go to meet the SDG target of reducing stunting to 31% and underweight to 25% among children under 5 by 2017.[30]

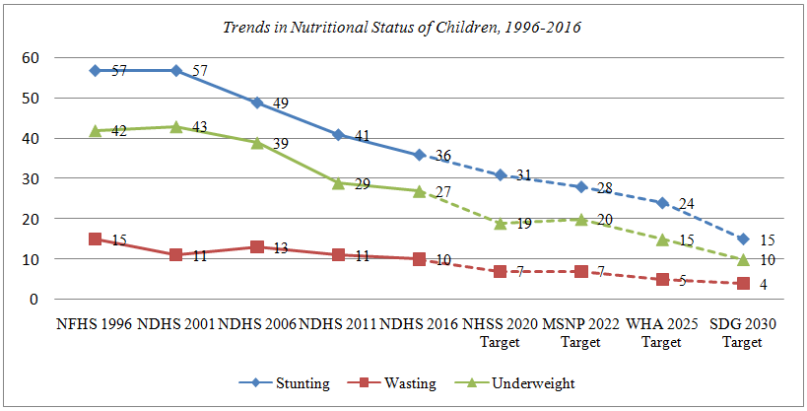

Figure 2: Trend in Nutritional Status of Children 1996-2016 by National Surveys[10, 15, 21, 30-34]

Utilization of Key Child Health Services

Utilization of key child health services based on national demographic health surveys (NDHS) along with NHSS and SDG target are presented in figure 3, 4 and 5.

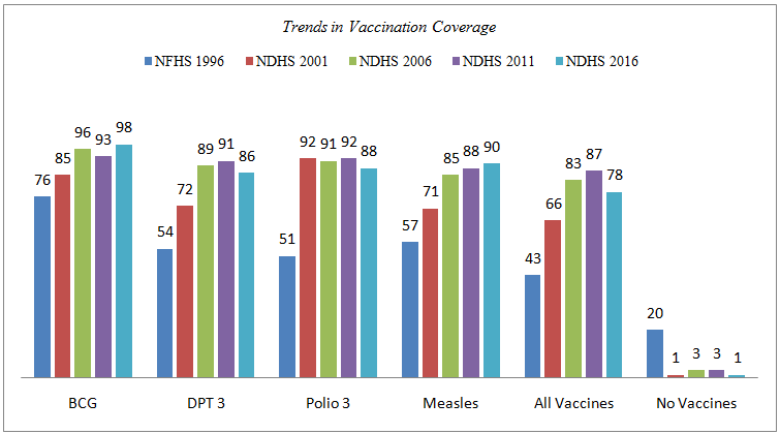

Figure 3: Trend in Vaccination Coverage 1996-2016 by National Surveys[10, 31-34]

About Four-fifth of children between 12-23 months had received all the basic vaccinations. The level of coverage for BCG is 98%, three doses of DPT and three doses of polio vaccine is above 85%, while for measles, the coverage is 90%. Vaccination coverage doubled from 1996 (43%) to 2011(87%) but declined by 9% in 2016 (78%).[10]

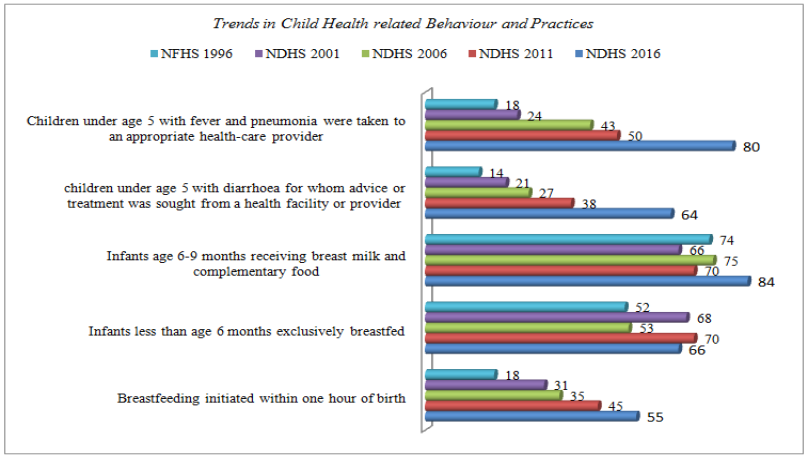

Figure 4: Trend in Child Health related Behaviour and Practices 1996-2016 by National Surveys[10, 31-34]

Breast feeding initiated within one hour of birth increased from 18 % in 1996 to 55% in 2016. Exclusive breastfeeding among children under age 6 months increased from 52% in 1996to 70% in 2011. However, there was a slight decline in the percentage of exclusively breastfed children to 66% in 2016. Eighty four percent (84%) of children age 6-9 months receive meals with the minimum recommended diversity (at least four food groups) along with breast milk and 47% of children age 6-23 months receive meals with the minimum recommended diversity (at least four food groups). 71% of children age 6-23 months had received food the minimum number of times appropriate for their age. The percentage of children fed according to the minimum recommended standards has improved in the last 5 years. In 2011, 24 % of children ages 6-23 months were fed a minimum acceptable diet, and in 2016, this percentage increased to 36%. [10]

Acute respiratory infection, fever, and dehydration with diarrhea are major contributing causes of childhood morbidity and mortality in developing countries.[35]According to NDHS 2016, 2% of children under age 5 had symptoms of acute respiratory infection and Eighty-five percent (85%) of children who had ARI symptoms were taken to a health facility or provider for advice or treatment. 21% of children under age 5 had a fever and 80% of them were taken to a health facility or provider for treatment or advice, and 35% received antibiotics. 8% of children under age 5 had diarrhea in the 2 weeks preceding the survey, and 64% of these children were taken to a health facility or provider for treatment or advice.

Among children with diarrhoea, oral rehydration salt packet was given to 30 percent children, zinc sulphate was receive by 18 percent children and oral rehydration salt and zinc sulphate was given to only 10 percent children. Additional fluids and uninterrupted feeding was given to only 29 percent of children with diarrhoea accoring to recommendations.[10]

The prevalence of symptoms of ARI among children under age 5 in Nepal fell from 5% in 2011 to 2% in 2016. The prevalence of fever among children under age 5 increased from 19% to 21% between 2011 and 2016. Children who had fever were taken to a health facility or provider for treatment or advice increased from 18% in 1996 to 80% in 2016. The prevalence of diarrhea decreased to 8% in 2016 from 14% in 2011. Children who had diarrhoea were taken to a health facility or provider for treatment or advice increased from 14% in 1996 to 64% in 2016.[10]

WAYS FORWARD

The Millennium Development Goals (MDGs) and Sustainable Development Goals have provided an important impetus to efforts to reduce child deaths, including neonatal deaths. However, most child deaths, including neonatal deaths could be prevented with available, simple, cost-effective solutions. A major challenge remains the implementation of these solutions in differing contexts where in many cases they do not currently reach the most vulnerable. High priority needs to be given to identifying approaches that overcome existing physical, economic and cultural barriers to care-seeking and provision of timely childbirth and newborn care as a prerequisite to enabling the scale-up of these solutions.[36]

Community-based health insurance schemes; expansion of child care homes, involvement of private-sector for child health care service are evidence proven strategies to ensure universal coverage on child health. "One village one doctor" aspiration of National Health policy 2014 is an example of bringing health services closer to the people.[21]

Improvement in Quality of Care

To make further progress towards ending preventable neonatal and child mortality a collaborative approach to ensure improvement in quality of care would be crucial. Improving the health of newborns and children will remain aspiration if quality of care is not put at the centre of debates on universal health.[37]

Strengthening Referral Service

Successful referral system includes geographical access to referral care facilities, accessible, available, affordable and acceptable referral services, and trained referral staff to provide quality care. Availability of ambulance and funds to manage emergency referal at all levels, and availibity of airlifting facility to manage emergency referral in remote areas of hill and mountain are examples of the major strategies to strengthen referral services.[24, 38]

Health System Strengthening

An effective and efficient health system is crucial to improve and ensure quality health services at the point of service delivery. Developing countries need to be strengthened in all components of health system to provide evidence based child health services and to respond to the priorities and needs of children.[21, 37]

Human Resource Gap Management

The NHSP-2 notes that 'capable, motivated health manpower forms the core of a high quality, effective and efficient health system'. To reduce the human resource gap in maternal and child health services, investment in expansion of skilled human resources as well as in management for the equitable distribution of health workforce and midwives are essential.[19, 39]

Responsibility and Accountability

A clear line of responsibility and accountability of child health care providers for the effective and efficient delivery of healthcare, to improve quality of care and make equity is required at all levels through policy provision and regulation.[21, 40]

Provision of Research and Finance

This will require close partnership between the research and health policy community, with engagement of front-line workers, mothers and families backed by strong local and national leadership and supported by adequate funding. Effective action is possible in all communities, and large reductions in mortality can be achieved with public health and low-tech, cost-effective interventions.[36]

CONCLUSIONS

Children are the leaders of future and builders of the nation and child health is foundational to adult health and well-being. They need special attention and care and their issues have to be well addressed in the development planning process of the country.

Following conclusions were derived from the above review:

- To address the child health related issues, Nepal has been concentrating its efforts since last three decades through formulation and implementation of several policies, programs and strategies.
- Although Nepal faced decade long war and political instability as well as economic ups and down, it has been successful in meeting its child health-related MDG targets but efforts are still insufficient to achieve national and international targets especially neonatal health related targets.
- More efforts are needed to sustain the current achievement and make further progress on child health.
- The findings of this review may be useful for the policy makers and program managers to focus on conducting more studies related to child health policy, program and gaps in Nepal, reducing the gaps and achieving the SDG related to child health on time.

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